

	YEAR 1 (From Sept 2022)	Year 2 (From Sept 2022)	Year 3 (From Sept 2022)
Curriculum Content	<p>Composite 1: Programming fundamentals – (KO Quiz generator)</p> <p>Component 1:</p> <ul style="list-style-type: none"> Understanding Computing sectors <p>Component 2:</p> <ul style="list-style-type: none"> Understand how the principles of algorithmic thinking are applied in different situations <ul style="list-style-type: none"> Algorithms Sequence Flowcharts <p>Component 3:</p> <ul style="list-style-type: none"> Understand and apply basic programming techniques <ul style="list-style-type: none"> Outputs Variables IF/ELIF Statements String manipulation <p>Component 4:</p> <ul style="list-style-type: none"> Understand and apply testing and evaluation techniques 	<p>Composite 1: Programming constructs – project higher or lower</p> <p>Component 1:</p> <ul style="list-style-type: none"> Understanding Computing sectors <p>Component 2:</p> <ul style="list-style-type: none"> To develop an understanding of the programming constructs (Sequence, Selection and Iteration) <p>Component 3:</p> <ul style="list-style-type: none"> Understand and apply basic programming techniques <ul style="list-style-type: none"> Variables IF, ELIF and ELSE Count and Conditional Loops Arrays functions <p>Component 4:</p> <ul style="list-style-type: none"> Understand and apply testing and evaluation techniques 	<p>Composite 1: Advanced Programming - Calculator // What's your story // Hangman</p> <p>Component 1:</p> <ul style="list-style-type: none"> Understanding Computing sectors <p>Component 2:</p> <ul style="list-style-type: none"> Develop an understanding for how computing has impacted society. <ul style="list-style-type: none"> Environmental Ethical Technology and industry improvement Cultural <p>Component 3:</p> <ul style="list-style-type: none"> Understand and apply basic programming techniques <ul style="list-style-type: none"> Variables IF, ELIF and ELSE Count and Conditional Loops Arrays String manipulation Functions File handling <p>Component 4:</p> <ul style="list-style-type: none"> Understand and apply testing and evaluation techniques
Prior knowledge and skills (from previous year / key stage)	<p>Students will have very little to no prior knowledge of programming concepts. Scratch is often taught at primary schools, but the actual fundamental concepts of programming are often lacking, if taught at all. Similarly, with this being a textual based program, students will struggle to make any connections between block placed programming and textual based programming</p>	<p>Students have been taught basic programming fundamentals in Python during the year 7 curriculum students should be able to create very simple programmes using key functions such as: variables, inputs, outputs, boolean operators and simple if statements.</p> <p>Students will also have experience of creating programmes to a given scenario based on a client brief</p>	<p>Students will have two rotations (Year 7 & 8) of experience using Python to develop programmes based on given scenarios. Students will have developed the necessary skills in casting loops creating arrays nested ifs and making comments within programmes. All of these skills across a seven and eight will be combined with the skills they are taught in year 9 to develop a high level program</p>
Assessment Objectives	<p>AO1 Understand how to respond to an computer science brief AO2 Select skills and techniques in response to an computer science brief AO3 Apply skills and techniques in response to an computer science brief AO4 Evaluate and review the outcomes of the application of skills and techniques in response to an computer science brief</p>		
Vocabulary / Key Subject Terminology			
Assessment 1	Knowledge retrieval questions	Knowledge retrieval questions	Knowledge retrieval questions
Assessment 2	Mastery tasks (2x)	Mastery tasks (2x)	Mastery tasks (2x)

<p>Cross Curricular Links with other Faculties</p>	<p>Science - Re-enforces concepts of variables and constants</p> <p>Maths – Students will study the use of logical and numerical operators within programming and gain a deeper understanding for the importance of why these operators are important to the success of the program. BIDMAS/BODMAS and ensuring students recognise the true link within Maths and Computing.</p> <p>Engineering - Links to AI and how they're programmed and used within industry (wider reading activities)</p> <p>Business – Unit 2 CAD/CAM. How computers aid and improve production and how jobs will be impacted with the increase of computers</p>		
<p>Knowledge Organiser content</p>	<ul style="list-style-type: none"> • Programming Keywords • Programming snippets • Flowchart symbols 	<ul style="list-style-type: none"> • Programming Keywords • Programming snippets • SSI • Functions & Procedures 	<ul style="list-style-type: none"> • Programming Keywords • Programming snippets • File handling • String manipulation
<p>British Values</p>	<ul style="list-style-type: none"> • 'Rule of Law' and why we have rules and regulations in the programming - safety. • 'Mutual Respect' and 'Tolerance' will be taught through component 1 as students learn about computing sectors and job roles. <p>Special attention will be made to promote career opportunities for female and ethnic minority students in computing.</p> <p>These British Values will be referenced whenever possible in each of the 12 lessons of the rotation.</p>	<ul style="list-style-type: none"> • 'Rule of Law' and why we have rules and regulations in the computing industry. • 'Mutual Respect' and 'Tolerance' will be referenced during the knowledge recall quizzes referencing year 1 content. 	<ul style="list-style-type: none"> • 'Rule of Law' and why we have rules and regulations in the computing industry. • 'Mutual Respect' and 'Tolerance' will be referenced during the knowledge recall quizzes referencing year 1 content.
<p>Extra-Curricular Offer</p>	<p>Gaming club</p>		



**THE OLDHAM
ACADEMY**
NORTH

